

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A printing apparatus for printing a pattern on a surface of a spark plug insulator, comprising:

a marking roller for forming an ink film on an intaglio thereon;

a transfer roller for transferring said ink film which is further transferred to said spark plug insulator in order to print said pattern;

an ink supply nozzle for supplying an ink for said ink film; and

a doctor blade for scratching from said marking roller said ink which does not contribute to form said ink film,

wherein a concave depth in said intaglio is greater than or equal to 15 μm and smaller than or equal to 20 μm , and

wherein said doctor blade is disposed at an upper side of said marking roller; is movable along the tangential and normal directions of the surface of said marking roller so as to follow swelling motion of said marking roller; and is pressed against said marking roller along a direction normal to the longitudinal direction of said doctor blade.

2. (currently amended) The printing apparatus according to claim 1, wherein:

said marking roller is made of metal; and

said transfer roller is made of resin, rubber, or resin-~~& rubber~~ and rubber.

Claim 3. (canceled)

Claim 4. (canceled)

5. (currently amended) ~~The~~ A printing apparatus according to claim 1 for printing a pattern on a surface of a spark plug insulator, comprising:

a marking roller for forming an ink film on an intaglio thereon;

a transfer roller for transferring said ink film which is further transferred to said spark plug insulator in order to print said pattern;

an ink supply nozzle for supplying an ink for said ink film; and

a doctor blade for scratching from said marking roller ink which does not contribute to form said ink film,

wherein a concave depth in said intaglio is greater than or equal to 15 μ m and smaller than or equal to 20 μ m, and

wherein said doctor blade is disposed at a lower side of said marking roller and is movable along the tangential and normal directions of the surface of said marking roller so as to follow swelling motion of said marking roller.

6. (currently amended) The printing apparatus according to claim 1, wherein a degree of hardness of said doctor blade is softer less than that of said marking roller.

7. (currently amended) The printing apparatus according to claim 1, wherein said ~~printing pressure expressed by~~ marking roller and said transfer roller are arranged such that a compression distance of said transfer roller is greater than or equal to 0.3 mm and smaller than or equal to 0.8 mm.

Claim 8. (canceled)

9. (original) The printing apparatus according to claim 1, wherein the surface of said transfer roller is stepped in accordance with the surface of said spark plug insulator.

10. (original) The printing apparatus according to claim 1, wherein the surface of said marking roller is hardened.

11. (original) The printing apparatus according to claim 1, wherein the surface of said marking roller is coated by TiN.

Claim 12. (canceled)

Claim 13. (canceled)

14. (new) The printing apparatus according to claim 5, wherein:
said marking roller is made of metal; and
said transfer roller is made of resin, rubber, or resin and rubber.

15. (new) The printing apparatus according to claim 5, wherein a degree of hardness of said doctor blade is less than that of said marking roller.

16. (new) The printing apparatus according to claim 5, wherein said marking roller and said transfer roller are arranged such that a compression distance of said transfer roller is greater than or equal to 0.3 mm and smaller than or equal to 0.8 mm.

17. (new) The printing apparatus according to claim 5, wherein the surface of said transfer roller is stepped in accordance with the surface of said spark plug insulator.

18. (new) The printing apparatus according to claim 5, wherein the surface of said marking roller is hardened.

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Appl. No. 10/621,498

November 24, 2004

19. (new) The printing apparatus according to claim 5, wherein the surface of said marking roller is coated with TiN.